

REPORT OF CONCENTRATED ANIMAL FEEDING OPERATION INSPECTION

At

K-4 Cattle, LLC
1213 J Avenue
Pender, NE 68047

NPDES # NE0134961

ON

August 14, 2024

BY

U. S. ENVIRONMENTAL PROTECTION AGENCY
Region 7
Enforcement and Compliance Assurance Division (ECAD)

1.0 INTRODUCTION

I performed a Concentrated Animal Feeding Operation (CAFO) inspection at the K-4 Cattle, LLC (Formerly LBBJ Inc.) facility on August 14, 2024. This inspection was performed pursuant to Section 308(a) of the Federal Water Pollution Control Act, as amended. This narrative report and Attachments present the findings and observations made during the inspection.

2.0 PARTICIPANTS

K-4 Cattle, LLC
Tom Reimers, Operator (402) 922-0547
Zack Johnson, Operator/Farm Hand

Nutrient Advisors, LLC
Allen Kampschnieder, Consultant (402) 372-2236

U.S. Environmental Protection Agency (EPA):
Zachary Leibowitz, Physical Scientist (Lead Inspector) (913) 551-7553
Email: leibowitz.zachary@epa.gov
Adam Hendrickson, Physical Scientist

Nebraska Department of Environment and Energy (NDEE):
Derek Schreiter, Inspector
Emily Kammerer, Inspector

3.0 INSPECTION PROCEDURES

I contacted Samantha Johnson of the K-4 Cattle LLC (K-4 Cattle) front office via telephone on August 13, 2024, and stated that I was planning to perform an inspection of the K-4 Cattle operation on Wednesday, August 14, 2024. Mrs. Johnson stated that operators would be available, and we agreed to meet at 9:00 am on Thursday, August 14, 2024. I also stated that I would have another EPA employee with me and that two staff from the Nebraska Department of Energy and Environment (NDEE) also planned to attend.

Prior to entering the K-4 Cattle facility, I conducted a visual reconnaissance of the facility, searching for areas of concern observable from the county roads such as discharges, drainage patterns, flow directions, distance and direction of nearest perennial waters, visual condition of perennial waters, facility location and layout. The facility is located approximately 5 miles northwest of Pender, Nebraska on J Avenue. An unnamed tributary of Rattlesnake Creek flows from the northwest to the southeast, $\frac{1}{4}$ mile south of the facility. The unnamed tributary flows for approximately $\frac{1}{2}$ mile southeast before entering Rattlesnake Creek. Rattlesnake Creek flows for approximately 3 miles before entering the Logan Creek Dredge north of Pender, Nebraska. The unnamed tributary and Rattlesnake Creek were flowing at the time of the inspection. Rattlesnake Creek is identified as a perennial water per the USGS topography maps.

I arrived at the facility at approximately 9:00 am and met with Mr. Reimers and Mr. Johnson of the facility as well as Mr. Kampschneider, the facility's nutrient management consultant. I presented my credentials and explained both the purpose of the inspection and the procedures I would follow during the inspection. Mr. Reimers and Mr. Johnson stated that they were operators of the facility and took care of day-to-day operations. I asked Mr. Reimers if the facility had a bio-security protocol and he said "no". I informed Mr. Reimers that since the facility did not have a bio-security protocol, I would be following the EPA Region VII bio-security protocol. I then made Mr. Reimers aware of his confidentiality rights and informed him that a Confidentiality Notice, which he reviewed, would be provided at the end of the inspection to make any claims. Mr. Reimers acted as the official facility representative during the inspection and provided the majority of the information pertaining to the facility operation. Mr. Reimers accompanied me during the entire inspection. After the conclusion of the inspection, Mr. Kampschneider provided me with electronic copies of facility records for review and provided additional waste management information during and after the inspection.

I explained to Mr. Reimers that I would be conducting the CAFO inspection under the authority of Section 308(a) of the Federal Water Pollution Control Act to evaluate the facility's compliance status with the requirements of the Clean Water Act (CWA). I explained that the inspection would consist of a review of facility operations, required records, waste generation and management practices, and a visual inspection of the facility. I stated that I would document my findings and observations by making photocopies, taking photographs and/or videos, obtaining statements from facility staff, and collecting samples of any observed discharges.

I conducted this inspection in accordance with the most current procedures described herein and the following EPA Region VII Standard Operating Procedures (SOPs), unless otherwise noted.

I completed my inspection and I summarized the findings and recommendations with Mr. Reimers, Mr. Johnson, and Mr. Kampschneider during the exit briefing. I collected samples from

a PVC pipe discharging into a ditch along J Avenue during the inspection. I did not issue a Notice of Preliminary Findings (NOPF) at the time of the inspection. Eight photos (photos 1-8) were taken in the two days preceding the inspection from public rights of way and thirty-seven photos (photos 9-45) were taken the day of the inspection, for a total of forty-five photos. See Attachment 1 for the digital photograph chain of custody/photo log and photos #1 - #45. Two videos were taken in the two days preceding the inspection from the public right of way. See Attachment 2 for the digital video log. See Attachment 3 for the facility layout and photo locations.

4.0 FACILITY DESCRIPTION

4.1 Facility Operations

The K-4 Cattle facility is located approximately 5 miles northwest of Pender, Nebraska, on the north side of J Avenue. The facility is located within the Omaha Tribe of Nebraska Indian Reservation boundaries. The facility's physical address is 1213 J Avenue, Pender, NE 68047. The legal description for the facility is the S ½ SW¼ of Section 12, in Township 25N, Range 5E, in Thurston County, Nebraska. Most of the facility is in the Rattlesnake Creek-Logan Creek Dredge (HUC12 102200040305) watershed, however the temporary hay/baled corn stalk, manure storage, and mortality burial areas are in the Pleasant Valley Cemetery-Logan Creek Dredge (HUC12 102200040303) watershed (Attachment 3A).

Mr. Reimers stated that the facility receives cattle at a weight between 600 - 800 pounds. The cattle are then fed out to approximately 1,300-1,500 pounds. Mr. Reimers stated that the facility owns most of the cattle on the lot but also has around 35 customers in the USA and Canada. Mr. Reimers stated that the facility has three full time employees for the operation. He also said that the facility will get help from some farm hands to help with manure spreading. The facility is permitted (Permit No. NE0134961) for up to 4,500 head of cattle (Attachment 4). Mr. Reimers said the facility had 2,311 head of cattle at the time of inspection.

The facility consists of approximately 39 acres of feeding pens and 44 acres of total drainage area. The facility utilizes approximately 24 pens (numbered 2-13 and 15-26) for feeding as well as several small sick/working pens (Attachment 3B). The facility controls process wastewater with two sedimentation basins ("Top" and "Bottom") located on the east and south side of the production area and one holding pond located in the southeast corner of the facility. The feedstock storage area is located in the northwest corner of the facility. According to Mr. Reimers, process wastewater from the feed stock storage area, sick pen, pens 2-7, 12-13, 15-20, and 25-26 flow by gravity into the bottom sedimentation basin. Liquid from the bottom sedimentation basin is then pumped (either manually or automatically using a float) into the waste storage pond (Attachment 3C). Process wastewater from pens 8-10 and 21-24 flow by gravity into the top sedimentation basin which then flows by gravity into the waste storage pond. The process wastewater is then pumped out of the waste storage pond to pivots on sites "2", "3 & 4" and "13 & 14" as outlined in the facility nutrient management plan (Attachment 5, Page 3-13). Mr. Kampschneider explained that the field "3 & 4" (directly east of the facility) is the most utilized field in the Nutrient Management Plan (NMP) for wastewater application and that in the Spring of 2024 the pivot completed a full circle to the north of "3&4." He said that it was tracked as a transfer. He confirmed that the field north of "3 & 4" is not included in the facility's NMP.

The facility also has a temporary hay/baled corn stalk storage area along the fence north of the production area. The facility disposes of mortalities by burial on ground located north of the facility. Mr. Reimers explained the solid manure in the pens is scraped every season if the pen is used. The facility has a solid manure stockpile area located northwest of the feedstock storage area. The solid manure stockpile is located outside of the controlled production area. The facility tries to incorporate the manure in the fall, but if the ground is frozen then the manure is incorporated in the spring.

4.2 CAFO Status

K-4 Cattle was issued a permit (NE0134961) by the U.S. Environmental Protection Agency Region 7 (EPA R7) on September 28, 2020 (Attachment 4). The permit is set to expire on September 27, 2025. The EPA issued the NPDES permit because K-4 Cattle lies within the territorial boundaries of the Omaha Tribe of Nebraska Reservation.

A review of facility records and statements made by Mr. Reimers and Mr. Johnson show that K-4 Cattle has confined at least 1,000 cattle for more than 45 days during the last 12-month period. Mr. Reimers stated that the number of cattle at the facility at the time of the inspection was approximately 2,311. After the completion of the inspection, I received the annual reports with monthly cattle inventory for 2020-2023 and it indicated that over 1,000 animals have been at the facility every month during that timeframe (Attachment 06). The visual inspection of the confinement lots also revealed no vegetative cover in any of the lots that confined cattle (see Photos 15-17, 19-20, 23-26, and 28-31). As a result of my observations, I determined that K-4 Cattle meets the definition of a large CAFO as it is defined in Title 40 of the Code of Federal Regulations (CFR), Part 122.23.

4.3 Regulatory History

Mr. Reimers said the facility, formerly known as LBBJ Inc. was first permitted as a CAFO around 2003 and in 2020 it became K-4 Cattle, LLC. The EPA R7 conducted routine inspections of the LBBJ Inc. facility on February 25, 2014, and July 16, 2019. The EPA R7 also conducted a discharge event response inspection on June 28, 2018.

During the February 25, 2014, inspection the EPA R7 inspector observed a pipe that would convey overflow from drinking water troughs (in pens 4-7) into a ditch along J Avenue. The EPA R7 inspector noted that verbal permission for the construction had been given by another EPA Region 7 staff, as long as the facility did not discharge to a “Water of the United States.” The inspector also noted that the culverts under J Avenue from the ditch would flow for approximately ¼ mile (across Site “13 & 14”) and into an unnamed tributary of Rattlesnake Creek. The inspector informed the facility that overflow water from drinking water troughs is considered process wastewater and any discharges into a “Water of the United States” would be considered an unauthorized discharge and a violation of the Clean Water Act.

During the June 28, 2018, discharge event response inspection, the facility told the EPA R7 inspector that the bottom sediment basin overflowed into a ditch along J Avenue from June 25 and June 26, 2018, following heavy rains (~9” of rain in 24 hours). The process wastewater then

flowed through a culvert under J Avenue following the same path as mentioned in the paragraph above.

5.0 FINDINGS AND OBSERVATIONS

I conducted an inspection on August 14, 2024, to determine if K-4 Cattle is in compliance with the CWA/NPDES permit and if the livestock waste control facility structures were capturing all process wastewater and not discharging to a water of the United States.

The weather conditions at the time of the inspection were cloudy with intermittent light rain and mild (70°F). I met with Mr. Reimers, Mr. Johnson, and Mr. Kampschneider, and discussed operational processes being performed at the facility. I performed a visual inspection of the facility, and reviewed on site records being maintained by the facility. K-4 Cattle had approximately 2,311 head of cattle on site at the time of the inspection. K-4 Cattle has been operating as a large CAFO since ownership was transferred from LBBJ Inc. in 2020 and must control all process wastewater discharges including the open confinement lots, manure stockpile/storage areas and feed stock storage areas.

During the visual inspection, I observed the manure storage area on the northwest of the facility's footprint (Photos 9-11). There was a small, temporary earthen berm located around most of the pile, however it was irregular and had been run over by equipment in spots (Photo 11). During precipitation events process wastewater from this pile would flow, uncontrolled, northwest into field designated as Site 2 in the facility's Effluent Distribution Plan (Attachment 5, Page 3-13) which is within the Pleasant Valley Cemetery-Logan Creek Dredge HUC12. The permit's Definitions section states that process wastewater includes "*any water which comes into contact with or is a constituent of raw materials, products, or byproducts including manure...*" Part I(B)(1) of the permit states that "[t]here must be no discharge of manure, litter, or process wastewater pollutants into waters of the United States" except for under extreme (25 year, 24 hour) precipitation events.

I observed vegetation growing on the north side of the manure pile as well as inorganic material in the pile, including a plastic water bottle. I also observed burned material. Mr. Reimers explained that they recently had a brush fire on the property and placed some of the material from the fire on the pile. Part I(B)(8)(v) of the permit requires the permittee to "[e]nsure that chemicals and other contaminants handled on-site are not disposed of in any manure, litter, process wastewater, or storm water storage or treatment system unless specifically designed to treat such chemicals or contaminants."

Following the inspection, Mr. Kampschneider provided land application nutrient budgets, manure analysis and equipment maintenance and inspections records for 2021 through August 2024 (Attachment 7).

I observed the feed storage area (Photos 12-14) and noted that process wastewater was flowing towards pen 7 (Photo 15) and would eventually flow to the bottom sedimentation basin.

We drove down the north access road of the facility and I observed that the highest point in the production area was along the north fence line between Pens 8 and 20 (Photos 16-18;

Attachment 3B). Precipitation that falls on the north side of the fence is diverted away from the production area. Likewise, precipitation that falls on the west side of the western fence (Photo 19), eastern side of the facility (Photo 31) and southern side of the southern fence (Photo 30) is diverted away from the production area.

As stated above, process wastewater from pens 8-11 and 21-24 flow into the top sedimentation basin (Photos 20-21). The top sedimentation basin had several feet of wastewater in it during the inspection and was actively flowing by gravity into the waste storage pond (Photos 40 and 42).

I also observed several feet of wastewater in the bottom sedimentation basin (Photo 22). I noted moderately high erosion of the road between pens 15 and 18 (Photo 25) which likely contributes high sediment and rock loading to this sedimentation basin. Mr. Reimers stated that the sedimentation basins were cleaned out last year and are cleaned out every 1-2 years depending on weather.

According to Mr. Reimers, process wastewater from the bottom sedimentation basin is pumped either manually (via a switch; Photo 38) or automatically (via a float; Photo 41) to the waste storage pond (Photo 39). The pump was operating during the inspection in manual mode. The outlet to the waste storage pond also acts as the staff gage of the waste storage pond (Photo 39). The waste storage pond level was at 12.5 ft during the inspection. This is below the must pump level (17.5 ft) and winter pump down level (13.0 ft) required in Part I(B)(2) of the permit. Following the inspection, I received waste storage pond levels for 2021 to August 2024 from Mr. Kampschneider (Attachment 8). The waste storage pond levels above the must pump level are summarized and compared to the pivot land application records in the facility's annual reports (Attachment 6) in Table 1. According to the annual reports, the only field (of available fields in Attachment 5, Page 3-13) utilized for waste storage pond pivot land application between 2020-2023 was site "3 & 4."

Table 1. Reported week(s) that waste storage pond exceeded must pump level (17.5 ft) and summary of land application of waste storage pond process wastewater via center pivot.

Year	Week start above pump level¹ (approximate date)	Week stop above pump level¹ (approximate date)	Pivot land application dates from annual report²
2021	13 (3/29/21)	29 (7/19/21)	11/6-7/ 2020 4/2-3 ,5-6 ,13,16- 17,21,5/21-22, 6/28-30, 7/1-3 ,5-8 ,20-21 ,24-26, 8/2-3, 10-11 / 2021
2022	24 (6/13/22)	30 (7/25/22)	9/6-7,10/4, 11/30/ 2021 7/19-20, 8/8-10/ 2022
2023	N/A (Did not go above must pump level)	N/A (Did not go above must pump level)	8/21-23/ 2022 7/20-22, 28-30/ 2023
2024	16 (4/15/24)	30 (7/22/24)	(Not Reported)

1 - Source: Attachment 8

2 - Source: Attachment 6

Mr. Reimers explained that the floating pump on southeast side of the waste storage pond (Photo 42) brings process wastewater to the center pivots via a series of pipes (Photos 43-45). Mr. Reimers said that the small concrete structure on the ground near the pipe was a freshwater source which could also be used by the pivot irrigation system. He explained that they would either run freshwater from this source or process wastewater from the waste storage pond and would not blend the two sources.

Prior to conducting the inspection on August 14, 2024 (which had intermittent rain), I conducted visual reconnaissance from J Avenue on August 12 and August 13, 2024 (which had no recent precipitation). During the reconnaissance and the inspection, I observed liquid ponding near the concrete structure and near J Avenue (Photos 43 and 45). Mr. Reimers explained that the pipe to the pivot runs north, uphill towards site "3 & 4." He said that the accumulated liquid I observed was backflow from the pivot irrigation system. He explained that when the system becomes depressurized, the liquid inside the pipe flows downhill, leaking out of the gaskets, and accumulates in this spot. He estimated that the ponded liquid was 50% freshwater and 50% process wastewater at the time of inspection.

I explained to Mr. Reimers that this is considered process wastewater and that it was uncontrolled. During precipitation events this process wastewater would be carried to the nearby ditch (Photos 30 and 41) and through culverts under J Avenue (Photos 32-35, 36-37) or, under severe precipitation events, could sheet flow directly across J Avenue. This would then travel approximately ¼ mile across Site "13 & 14" and into an unnamed tributary of Rattlesnake Creek (Photos 1-2). Part I(B)(1) of the permit states that "[t]here must be no discharge of manure, litter, or process wastewater pollutants into waters of the United States" except for under extreme (25 year, 24 hour) precipitation events.

While conducting visual reconnaissance from J Avenue on August 12 and 13, 2024, I observed a 4-6 inch white PVC pipe originating from the facility and discharging into a ditch along the north J Avenue (Photo 3, Photo 8, Video 1, and Video 2). I also observed this pipe discharging during the visual inspection (Photo 36). I identified two culverts that connect this ditch to the field across the street. One culvert that is around 40 feet from the outfall (Photos 35 and 37) and another that is around 150 feet from the outfall (Photos 32-34). I estimated that the culverts are around 3-4 feet higher than the ditch bottom. The water in the ditch had thick algal growth and a mucky bottom.

Mr. Reimers explained that the liquid I observed discharging into the ditch was overflow from the watering troughs in the sick/working pens, pens 2-7, and pens 25-26, and that it is conveyed by an underground pipe. He said that the facility can direct this water to the bottom sedimentation basin or to the ditch along J Avenue via a removable boot/connector. During the visual inspection he pointed out the location of the removable boot/connector in the southwest corner of the bottom sedimentation basin (Photos 23-24). He said that the facility only directs water to the ditch when they are trying to dry out the sedimentation basin for cleaning. However, he also said that the facility had been discharging to the ditch since the spring and that the facility will typically direct water to the bottom sedimentation basin in the winter and direct it to the ditch in the spring, summer and fall. After the inspection, Mr. Kampschneider provided additional documentation regarding the PVC pipe, including a letter to EPA Region 7 dated October 12, 2012 (which includes a map of existing and proposed water overflow pipes) and nitrate sample analysis results for the overflow water from February 2015 (Attachment 9). The

map provided by Mr. Kampshneider does not appear to match what I observed in the field. Specifically, I observed that the pipe is located at the southeast corner of pen 4 (where the two existing pipes in the provided map meet) and continues underground into the roadside ditch further east.

The permit's Definitions section states that process wastewater includes "...*spillage or overflow from animal or poultry watering systems...*" Part I(B)(1) of the permit states that "[t]here must be no discharge of manure, litter, or process wastewater pollutants into waters of the United States" except for under extreme (25 year, 24 hour) precipitation events.

Following the exit interview, I collected samples from the outfall for nutrient, chloride, Biochemical Oxygen Demand (BOD) and *Escherichia coli* (*E. coli*) analysis. I collected duplicate *E. coli* samples and both samples were analyzed at 1:1 and 1:10 dilutions. All samples appeared clear, with some floating debris. Mr. Kampschneider collected a sample following my sample collection, which he said he would convey to a lab for nitrate analysis. The samples I collected were analyzed by Analytical & Consulting Services, Inc. (Sergeant Bluff, IA). Results are summarized in Table 2 and the laboratory data sheets are attached to this document (Attachment 10).

Table 2. Laboratory analysis results for samples collected on August 13, 2024, from the PVC pipe discharging to ditch along J Ave. Analysis was completed by Analytical & Consulting Services, Inc. (Sergeant Bluff, IA).

Sample Collection Date/Time	Sample I.D.	BOD ₅ (mg/L)	Total Suspended Solids (TSS) (mg/L)	Nitrate + Nitrite Nitrogen (mg/L)	Ammonia Nitrogen (NH ₃ -N) (mg/L)	Total Kjeldahl Nitrogen (TKN) (mg/L)	Total Phosphorus (as P) (mg/L)	Chloride (mg Cl ⁻ /L)	<i>E. coli</i> Coliform (#/100ml)
8/14/24 12:50 PM	PVC Pipe 1*	25.2	13.0	0.056	14.2	17.0	1.20	112	>2,400 (1:1 Dil'n) >24,000 (1:10 Dil'n)
8/14/24 12:50 PM	PVC Pipe 1 Dup*								>2,400 (1:1 Dil'n) >24,000 (1:10 Dil'n)

As stated above, an unnamed tributary of Rattlesnake Creek flows from the northwest to the southeast, ¼ mile south of the facility. The unnamed tributary flows for approximately ½ mile southeast before entering Rattlesnake Creek. Both the unnamed tributary and Rattlesnake Creek were flowing at the time of inspection (Photos 1-2 and 3-7; Attachment 11; Attachment 3D).

6.0 SUMMARY

The K-4 Cattle facility is located approximately 5 miles northwest of Pender, Nebraska, on the north side of J Avenue. The facility is located within the Omaha Tribe of Nebraska Indian Reservation boundaries.

Both during the inspection and during the visual reconnaissance of the facility prior to inspection, I observed ponding near a piping junction southeast of the waste storage pond as well as a PVC pipe discharging to a ditch along J Avenue. I collected samples from the discharging pipe for analysis. Both the ponded water and the discharged water are considered process wastewater. The facility is required to prevent the discharge of process wastewater to Waters of the United States.

I also observed a manure storage area north of the facility, outside of the drainage area of the waste storage pond. Although there was a small berm around the pile, it was irregular and missing in some areas. During precipitation events, process wastewater from the pile would flow north, uncontrolled, into the Pleasant Valley Cemetery-Logan Creek Dredge hydrologic unit. I also observed burnt debris and inorganic material in the manure storage pile.

**ZACHARY
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Zachary Leibowitz
Physical Scientist

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Nicole Moran
Section Supervisor

ATTACHMENTS:

1. Digital Photograph Image Chain of Custody/Photo Log and Photos #1 - #45 (49 pages)
2. Digital Video Chain of Custody/Video Log and Videos #1 - #2 (3 pages)
3. Facility Satellite Photos/Maps (4 pages)
 - A. Hydrologic Unit Code (HUC) 12 Map
 - B. Site Overview Map
 - C. Controlled Process Wastewater Flow Path Map
 - D. Facility Locator Map
4. NPDES permit, NE0134961 (19 pages)
5. Nutrient Management Plan (126 pages)
6. 2020 - 2023 Annual Reports (39 pages)
7. January 2021 - August 2024 Land Application Records (67 pages)
8. January 2021 - August 2024 Waste Storage Pond Levels (4 pages)
9. Water Trough Overflow Documentation (3 pages)
10. August 13, 2024 PVC Pipe Sample Analysis (3 pages)
11. EPA Stream Characteristics and Water Nexus Form (2 pages)